

Letter from Alexander Graham Bell to Mabel Hubbard Bell, October 30, 1896, with transcript

ALEXANDER GRAHAM BELL TO MABEL (Hubbard) BELL Beinn Bhreagh, C. B. Friday, October 30, 1896. My darling May:

Nothing special to report. Have been pegging away all day in the laboratory at one point. Answer conclusive but not as I expected.

In my last I told you that a 4 cm. strip of tin 50 cm. long but so — gave a greater lift than in the old experiment of bending a similar strip 20 cm. long so

1. Today — I cut down the 50 cm. strip little by little to find out the height that should give best effect. Lift increased until level of axis was reached when further cutting reduced it. No special advantage in carrying sides up higher than the axis of rotation.

Height Lift

21 cm. 73.6 grammes

18 64.0

16 68.0

14 68.0

12 74.4

10 79.2

8 81.2

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6 80.2

4 61.4

2 46.8

On page 4 you will find these results shown graphically. AGB.

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2. A greater lift is obtained when the bottom of the tin strip is rounded to fit the propeller — than when it is flat.

Same strip of tin used in both experiments.

3. Vertical sides did not yield the maximum lift with 60 cm. strip as expected — but difference so slight as to be inconclusive until verified by further observation.

This last result will be investigated tomorrow — but as it is undoubtedly the case that the strip should closely hug the propeller up to the height of the axis. Will try bending strip only above that point.

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Results of Point 1 — graphically shown — see figures upon page 2.

Tired out this evening and sleepy before the warm fire. So went to bed about half-past eight — wakened much refreshed about 12:45 — and came down stairs to read newspapers and write to you. Must now close as I want to write out some instructions for Mr. Ellis before going up stairs. With such love,

Your loving husband, Alec. Mrs. A. G. Bell, 1331 Connecticut Ave., Washington, D. C.